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What is claimed is:

1. A method for giving resistance to weed control compounds to plants which comprises the steps of:

introducing a gene encoding a protein having the following characteristics (a) to (c):

(a) having a specific affinity for a substance which is concerned with the weed control activity of a weed control compound,

(b) having substantially no capability of modifying a substance for which said protein has a specific affinity, and

(c) being substantially free from framework regions of variable regions in an immunoglobulin,

into a plant cell; and

expressing the gene.

2. The method according to claim 1, wherein the gene is introduced into the plant cell in the form that it is operably ligated to a promoter and a terminator both of which are functional in the plant cell.

3. The method according to claim 1 or 2, wherein the substance which is concerned with the weed control activity of the weed control compound is the weed control compound itself.

4. The method according to claim 1, wherein the substance which is concerned with the weed control activity

of a weed control compound is an endogenous substance in a plant.

5. The method according to claim 1, wherein the weed control compound is that inhibiting porphyrin biosynthesis of a plant.

6. The method according to claim 1, wherein the weed control compound is a protoporphyrinogen IX oxidase inhibitory-type herbicidal compound.

7. The method according to claim 5 or 6, wherein the substance which is concerned with the weed control activity of the weed control compound is protoporphyrin IX.

8. The method according to claim 5 or 6, wherein the protein is protoporphyrin IX binding subunit protein of magnesium chelatase, or a variant of said protein having a specific affinity for protoporphyrin IX.

9. The method according to claim 8, wherein the protein is magnesium chelatase derived from a photosynthetic microorganism.

10. The method according to claim 8, wherein the protein is magnesium chelatase derived from a plant.

11. The method according to claim 8, wherein the protein is magnesium chelatase derived from tobacco.

12. The method according to claim 5 or 6, wherein the protein comprises the amino acid sequence of SEQ

ID NO: 53.

13. The method according to claim 5 or 6, wherein the protein has the amino acid sequence of SEQ ID NO: 54.

14. The method according to claim 5 or 6, wherein the protein comprises the amino acid sequence of SEQ ID NO: 55.

15. The method according to claim 5 or 6, wherein the protein has the amino acid sequence of SEQ ID NO: 56.

16. The method according to claim 5 or 6, wherein the protein comprises the amino acid sequence of SEQ ID NO: 57.

17. The method according to claim 5 or 6, wherein the protein has the amino acid sequence of SEQ ID NO: 58.

18. The method according to claim 5 or 6, wherein the protein comprises the amino acid sequence of SEQ ID NO: 59.

19. The method according to claim 5 or 6, wherein the protein has of the amino acid sequence of SEQ ID NO: 60.

20. The method according to claim 5 or 6, wherein the protein is composed of 4 to 100 amino acids.

21. The method according to claim 5 or 6,

wherein the substance which is concerned with the weed control activity of the weed control compound is protoporphyrinogen IX.

22. The method according to claim 5 or 6, wherein the protein is a variant of protoporphyrinogen IX oxidase having no capability of oxidizing protoporphyrinogen IX and having a specific affinity for a protoporphyrinogen IX.

23. The method according to claim 5 or 6, wherein the protein is a variant of protoporphyrinogen IX oxidase having no capability of oxidizing protoporphyrinogen IX and having a specific affinity for a protoporphyrin IX oxidase inhibitory-type herbicidal compound.

24. The method according to claim 22 ~~or 23,~~ wherein the protein is a variant of protoporphyrinogen IX oxidase derived from a plant.

25. The method according to claim 22 ~~or 23,~~ wherein the protein is a variant of protoporphyrinogen IX oxidase derived from soybean.

26. The method according to claim 22 ~~or 23,~~ wherein the protein is a variant of protoporphyrinogen IX oxidase derived from an algae.

27. The method according to claim 22 ~~or 23,~~ wherein the protein is a variant of protoporphyrinogen IX

oxidase derived from *Chlamydomonas*.

28. A method for giving resistance to weed control compounds to plants which comprises the steps of:

introducing a gene encoding a protein having the following characteristics (a) to (c):

(a) having a specific affinity for protoporphyrin IX,

(b) having substantially no capability of modifying protoporphyrinogen IX, and

(c) being substantially free from framework regions of variable regions in an immunoglobulin,

into a plant cell; and

expressing the gene.

29. The method according to claim 28, wherein the gene is introduced in the plant cell in the form that it is operably ligated to a promoter and a terminator both of which are functional in the plant cell.

30. The method according to claim 28, wherein the weed control compound is that inhibiting porphyrin biosynthesis of a plant.

31. The method according to claim 28, wherein the weed control compound is a protoporphyrinogen IX oxidase inhibitory-type herbicidal compound.

32. The method according to claim 30 or 31, wherein the protein is magnesium chelatase or a variant of

said protein having a specific affinity for protoporphyrin IX.

33. The method according to claim 30 or 31, wherein the protein is ferrochelatase or a variant of said protein having a specific affinity for protoporphyrin IX.

34. The method according to claim 30 or 31, wherein the protein is ferrochelatase derived from a plant.

35. The method according to claim 30 or 31, wherein the protein is ferrochelatase derived from barley.

36. The method according to claim 30 or 31, wherein the protein is ferrochelatase derived from cucumber.

37. The method according to claim 30 or 31, wherein the protein is a peptide composed of 4 to 100 amino acids.

38. A method for giving resistance to weed control compounds to plants which comprises the steps of:

introducing a gene encoding a protein having the following characteristics (a) to (c):

(a) having a specific affinity for protoporphyrinogen IX,

(b) having the capability for modifying coproporphyrinogen III, and

(c) being substantially free from framework regions of variable regions in an immunoglobulin;

into a plant cell; and

expressing the gene.

39. The method according to claim 38, wherein the gene is introduced into the plant cell in the form that it is operably ligated to a promoter and a terminator both of which are functional in the plant cell.

40. The method according to claim 38, wherein the protein is coproporphyrinogen III oxidase or a variant of said protein having a specific affinity for protoporphyrinogen IX.

41. The method according to claim 38, wherein the protein is coproporphyrinogen III oxidase derived from a microorganism.

42 The method according to claim 38, wherein the protein is coproporphyrinogen III oxidase derived from *Escherichia coli*.

43. A weed control compound-resistant plant whose resistance is given by the method of claim 1 or 28.

44. A weed control compound-resistant plant whose resistance is given by the method of claim 38.

45. A method for protecting a plant which comprises applying the weed control compound to a growth area of the plant of claim 43.

46. A method for protecting a plant which comprises applying said weed control compound to a growth area of the plant of claim 44.

47. A method for selecting a plant which comprises applying a weed control compound to which the plant of claim 43 is resistant to a growth area of the plant of claim 43 and other plants, and selecting either plant on the basis of difference in growth between the plants.

48. A method for selecting a plant which comprises applying a weed control compound to which the plant of claim 44 is resistant to a growth area of the plant of claim 44 and other plants, and selecting either plant on the basis of difference in growth between the plants.

49. The method according to claim 47, wherein the plants are plant cells.

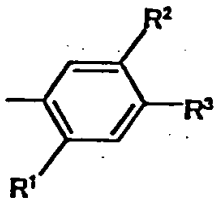
50. The method according to claim 48, wherein the plants are plant cells.

51. The method according to claim 1 or 2, wherein the weed control compound is a protoporphyrinogen IX oxidase inhibitory-type herbicidal compound selected from the compounds of (1) to (3) below, and the substance which is concerned with the weed control activity of the weed control compound is protoporphyrin IX, protoporphyrinogen IX or a protoporphyrinogen IX oxidase inhibitory-type herbicidal compound:

(1) chlormethoxynil, bifenox, chlornitrofen,

acifluorfen and its ethyl ester, acifluorfen-sodium, oxyfluorfen, oxadiazon, 2-[4-chloro-2-fluoro-5-(prop-2-ynyloxy)phenyl]-2,3,4,5,6,7-hexahydro-1H-isoindol-1,3-dione, chlorphthalim, TNPP-ethyl, or N3-(1-phenylethyl)-2,6-dimethyl-5-propyonylnicotinamide;

(2) a compound represented by the general formula: J-G (I), wherein G is a group represented by any one of the following general formulas G-1 to G-9 and J is a group represented by any one of the following general formulas J-1 to J-30:



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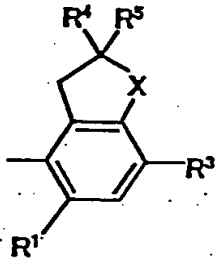

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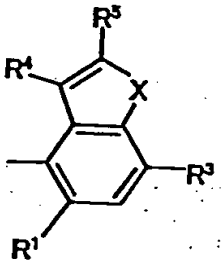

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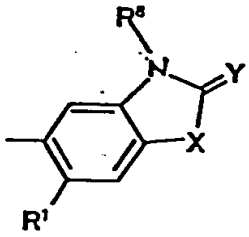

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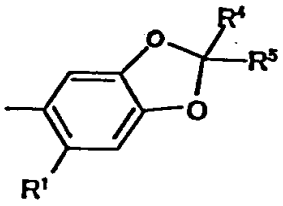

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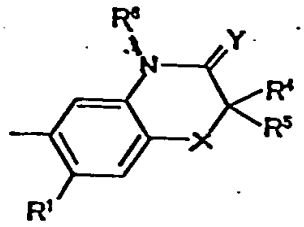

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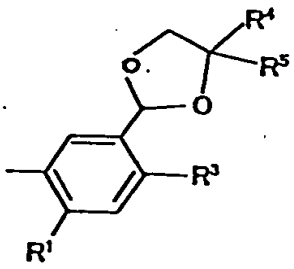

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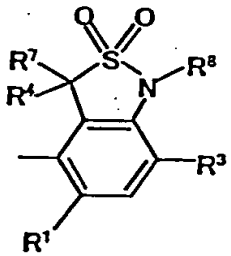

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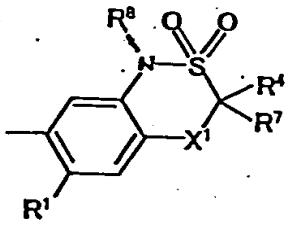

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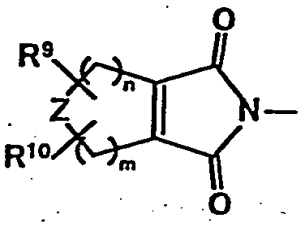

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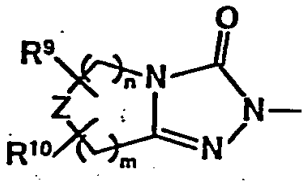

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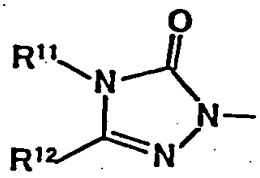

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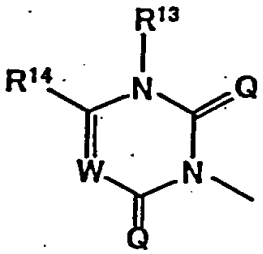

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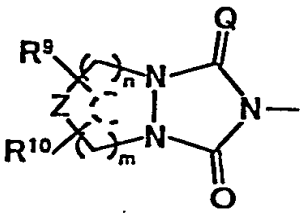

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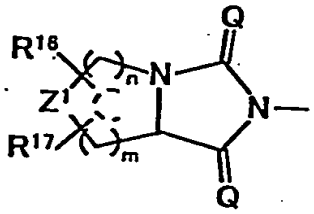

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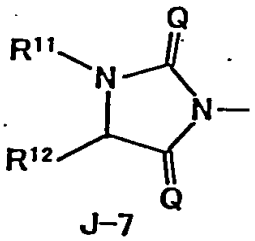

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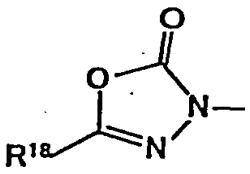

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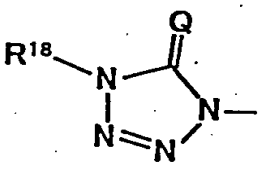

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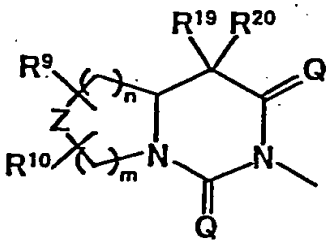

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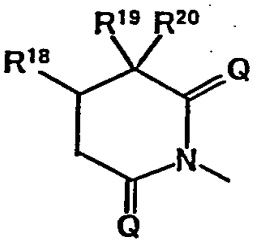

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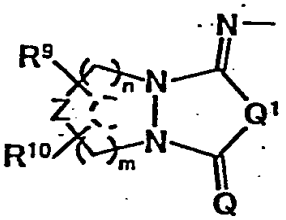

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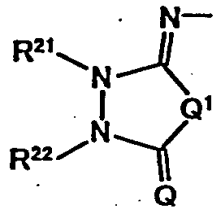

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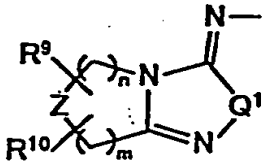

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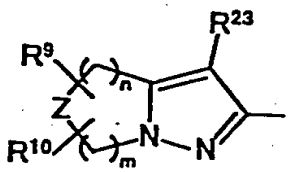

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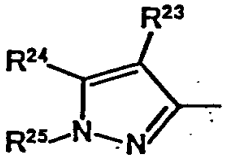

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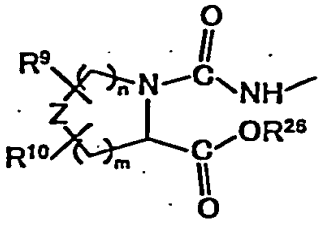

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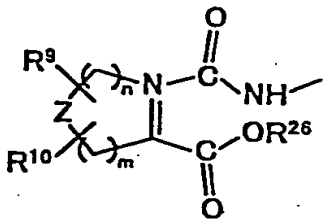

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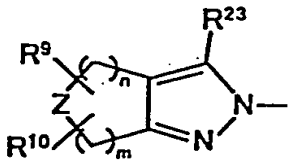

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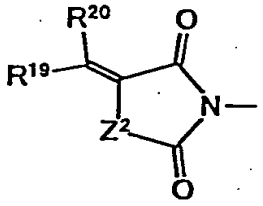

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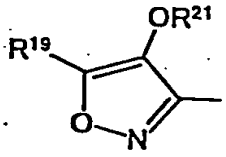

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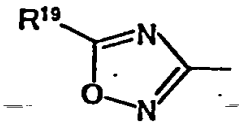

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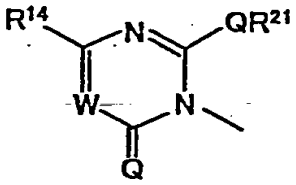

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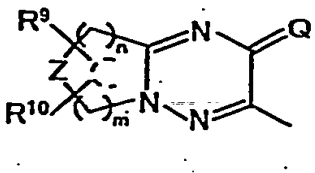

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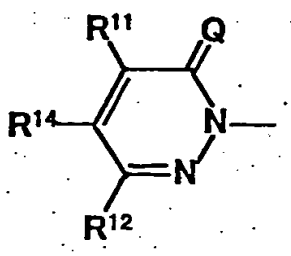

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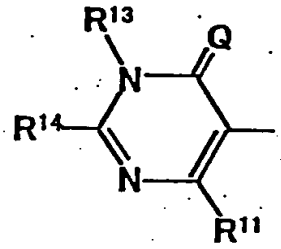

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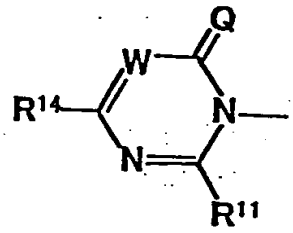

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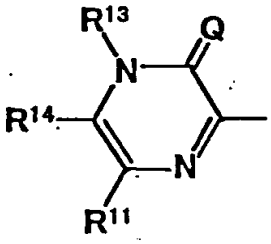

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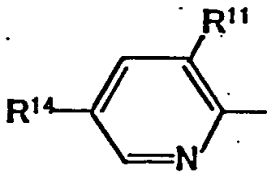

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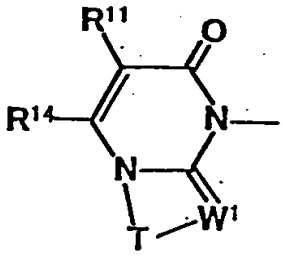


J-30

wherein the dotted lines in the formulas J-5, J-6, J-12 and J-24 represent that the left hand ring contains only single bonds, or one bond in the ring is a double bond between carbon atoms;

X is oxygen atom or sulfur atom;

Y is oxygen atom or sulfur atom;

R^1 is hydrogen atom or halogen atom;

R^2 is hydrogen atom, C_1-C_8alkyl group, C_1-C_8 haloalkyl group, halogen atom, OH group, OR^{27} group, SH group, $S(O)_pR^{27}$ group, COR^{27} group, CO_2R^{27} group, $C(O)SR^{27}$ group, $C(O)NR^{29}R^{30}$ group, CHO group, $CR^{27}=NOR^{36}$ group, $CH=CR^{37}CO_2R^{27}$ group, $CH_2CHR^{37}CO_2R^{27}$ group, $CO_2N=CR^{31}R^{32}$ group, nitro group, cyano group, $NHSO_2R^{33}$ group, $NHSO_2NHR^{33}$ group, $NR^{27}R^{38}$ group, NH_2 group or phenyl group optionally

substituted with one or more and the same or different C_1-C_4 alkyl groups;

p is 0, 1 or 2;

R^3 is C_1-C_2 alkyl group, C_1-C_2 haloalkyl group, OCH_3 group, SCH_3 group, $OCHF_2$ group, halogen atom, cyano group or nitro group;

R^4 is hydrogen atom, C_1-C_3 alkyl group, C_1-C_3 haloalkyl group or halogen atom;

R^5 is hydrogen atom, C_1-C_3 alkyl group, halogen atom, C_1-C_3 haloalkyl group, cyclopropyl group, vinyl group, C_2 alkynyl group, cyano group, $C(O)R^{38}$ group, CO_2R^{38} group, $C(O)NR^{38}R^{39}$ group, $CR^{34}R^{35}CN$ group, $CR^{34}R^{35}C(O)R^{38}$ group, $CR^{34}R^{35}CO_2R^{38}$ group, $CR^{34}R^{35}C(O)NR^{38}R^{39}$ group, $CHR^{34}OH$ group, $CHR^{34}OC(O)R^{38}$ group or $OCHR^{34}OC(O)NR^{38}R^{39}$ group, or, when G is G-2 or G-6, R^4 and R^5 may form C=O group together with the carbon atom to which they are attached;

R^6 is C_1-C_6 alkyl group, C_1-C_6 haloalkyl group, C_2-C_6 alkoxyalkyl group, C_3-C_6 alkenyl group or C_3-C_6 alkynyl group;

X^1 is single bond, oxygen atom, sulfur atom, NH group, $N(C_1$-C_3 alkyl) group, $N(C_1$-C_3 haloalkyl) group or N(allyl) group;

R^7 is hydrogen atom, C_1-C_6 alkyl group, C_1-C_6 haloalkyl group, halogen atom, $S(O)_2(C_1$-C_6alkyl) group or $C(=O)R^{40}$ group;

R^8 is hydrogen atom, C_1-C_8 alkyl group, C_3-C_8 cycloalkyl group, C_3-C_8 alkenyl group, C_3-C_8 alkynyl group, C_1-C_8 haloalkyl group, C_2-C_8 alkoxyalkyl group, C_3-C_8 alkoxyalkoxyalkyl group, C_3-C_8 haloalkynyl group, C_3-C_8 haloalkenyl group, C_1-C_8 alkylsulfonyl group, C_1-C_8 haloalkylsulfonyl group, C_3-C_8 alkoxycarbonylalkyl group, $S(O)_2NH(C_1$-C_8 alkyl) group, $C(O)R^{41}$ group or benzyl group whose phenyl ring may be substituted with R^{42};

n and m are independently 0, 1, 2 or 3 and m + n is 2 or 3;

Z is CR^9R^{10} group, oxygen atom, sulfur atom, S(O) group, $S(O)_2$ group or $N(C_1$-C_4 alkyl) group;

each R^9 is independently hydrogen atom, C_1-C_3 alkyl group, halogen atom, hydroxyl group, C_1-C_6 alkoxy group, C_1-C_6 haloalkyl group, C_1-C_6 haloalkoxy group, C_2-C_6 alkylcarbonyloxy group or C_2-C_6 haloalkylcarbonyloxy group;

each R^{10} is independently hydrogen atom, C_1-C_3 alkyl group, and hydroxyl group or halogen atom;

R^{11} and R^{12} are independently hydrogen atom, halogen atom, C_1-C_6 alkyl group, C_3-C_6 alkenyl group or C_1-C_6 haloalkyl group;

R^{13} is hydrogen atom, C_1-C_6 alkyl group, C_1-C_6 haloalkyl group, C_3-C_6 alkenyl group, C_3-C_6 haloalkenyl group, C_3-C_6 alkynyl group, C_3-C_6 haloalkynyl group, HC(=O) group, $(C_1$-C_4 alkyl)C(=O) group or NH_2 group;

R^{14} is C_1-C_6 alkyl group, C_1-C_6 alkylthio group, C_1-C_6 haloalkyl group or $N(CH_3)_2$ group;

W is nitrogen atom or CR^{15};

R^{15} is hydrogen atom, C_1-C_6 alkyl group, halogen atom, or phenyl group optionally substituted with C_1-C_6 alkyl group, one or two halogen atoms, C_1-C_6 alkoxy group or CF_3 group;

each Q is independently oxygen atom or sulfur atom;

Q^1 is oxygen atom or sulfur atom;

Z^1 is $CR^{16}R^{17}$ group, oxygen atom, sulfur atom, S(O) group, $S(O)_2$ group or N(C_1-C_4alkyl) group;

each R^{16} is independently hydrogen atom, halogen atom, hydroxyl group, C_1-C_6 alkoxy group, C_1-C_6 haloalkyl group, C_1-C_6 haloalkoxy group, C_2-C_6 alkylcarbonyloxy group or C_2-C_6 haloalkylcarbonyloxy group;

each R^{17} is independently hydrogen atom, hydroxyl group or halogen atom;

R^{18} is C_1-C_6 alkyl group, halogen atom or C_1-C_6 haloalkyl group;

R^{19} and R^{20} are independently hydrogen atom, C_1-C_6 alkyl group, or C_1-C_6 haloalkyl group;

Z^2 is oxygen atom, sulfur atom, NR^9 group or CR^9R^{10} group;

R^{21} and R^{22} are independently C_1-C_6 alkyl group, C_1-

C_6 haloalkyl group, C_3-C_6 alkenyl group, C_3-C_6 haloalkenyl group, C_3-C_6 alkynyl group or C_3-C_6 haloalkynyl group;

R^{23} is hydrogen atom, halogen atom or cyano group;

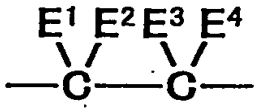
R^{24} is C_1-C_6 alkylsulfonyl group, C_1-C_6 alkyl group, C_1-C_6 haloalkyl group, C_3-C_6 alkenyl group, C_3-C_6 alkynyl group, C_1-C_6 alkoxy group, C_1-C_6 haloalkoxy group or halogen atom;

R^{25} is C_1-C_6 alkyl group, C_1-C_6 haloalkyl group, C_3-C_6 alkenyl group or C_3-C_6 alkynyl group;

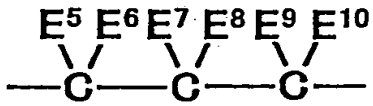
R^{26} is C_1-C_6 alkyl group, C_1-C_6 haloalkyl group or phenyl group optionally substituted with C_1-C_6 alkyl, one or two halogen atoms, one or two nitro groups, C_1-C_6 alkoxy group or CF_3 group;

W^1 is nitrogen atom or CH group;

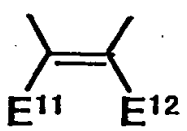
T is a group represented by any one of the following general formulas T-1, T-2 and T-3;



T-1



T-2



T-3

(wherein E^1, E^2, E^3, E^4, E^5, E^6, E^7, E^8, E^9, E^{10}, E^{11} and E^{12} are independently hydrogen atom or C_1-C_3 alkyl group);

R^{27} is C_1-C_8 alkyl group, C_3-C_8 cycloalkyl group,

C_3-C_8 alkenyl group, C_3-C_8alkynyl group, C_1-C_8 haloalkyl group, C_2-C_8 alkoxyalkyl group, C_2-C_8 alkylthioalkyl group, C_2-C_8 alkylsulfinylalkyl group, C_2-C_8 alkylsulfonylalkyl group, C_1-C_8 alkylsulfonyl group, phenylsulfonyl group whose phenyl ring may be substituted with at least one substituent selected from the group consisting of halogen atom and C_1-C_4 alkyl group, C_4-C_8 alkoxyalkoxyalkyl group, C_4-C_8 cycloalkylalkyl group, C_6-C_8 cycloalkoxyalkyl group, C_4-C_8 alkenyloxyalkyl group, C_4-C_8 alkynyloxyalkyl group, C_3-C_8 haloalkoxyalkyl group, C_4-C_8 haloalkenyloxyalkyl group, C_4-C_8 haloalkynyloxyalkyl group, C_6-C_8 cycloalkylthioalkyl group, C_4-C_8 alkenylthioalkyl group, C_4-C_8 alkynylthioalkyl group, C_1-C_4 alkyl group substituted with phenoxy group whose ring is substituted with at least one substituent selected from the group consisting of halogen atom, C_1-C_3 alkyl group and C_1-C_3 haloalkyl group, benzyloxy group whose ring is substituted with at least one substituent selected from the group consisting of halogen atom, C_1-C_3 alkyl group and C_1-C_3 haloalkyl group, C_4-C_8 trialkylsilylalkyl group, C_3-C_8 cyanoalkyl group, C_3-C_8 halocycloalkyl group, C_3-C_8 haloalkenyl group, C_5-C_8 alkoxyalkenyl group, C_5-C_8 haloalkoxyalkenyl group, C_5-C_8 alkylthioalkenyl group, C_3-C_8 haloalkynyl group, C_5-C_8 alkoxyalkynyl group, C_5-C_8 haloalkoxyalkynyl group, C_5-C_8 alkylthioalkynyl group, C_2-C_8 alkylcarbonyl group, benzyl group whose ring is substituted

with at least one substituent selected from the group consisting of halogen atom, C_1-C_3 alkyl group and C_1-C_3 haloalkyl group, $CHR^{34}COR^{28}$ group, $CHR^{34}COOR^{28}$ group, $CHR^{34}P(O)(OR^{28})_2$ group, $CHR^{34}P(S)(OR^{28})_2$ group, $CHR^{34}C(O)NR^{29}R^{30}$ group or $CHR^{34}C(O)NH_2$ group;

R^{28} is C_1-C_6 alkyl group, C_2-C_6 alkenyl group, C_3-C_6 alkynyl group or tetrahydrofuranyl group;

R^{29} and R^{31} are independently hydrogen atom or C_1-C_4 alkyl group;

R^{30} and R^{32} are independently C_1-C_4 alkyl group or phenyl group whose ring may be substituted with at least one substituent selected from the group consisting of halogen atom, C_1-C_3 alkyl group and C_1-C_3 haloalkyl group; or,

R^{29} and R^{30} together may form $-(CH_2)_5-$, $-(CH_2)_4-$ or $-CH_2CH_2OCH_2CH_2-$, or the ring thus formed may be substituted with at least one substituent selected from the group consisting of C_1-C_3 alkyl group, phenyl group and benzyl group; or,

R^{31} and R^{32} may from C_3-C_8 cycloalkyl group together with the carbon atom to which they are attached;

R^{33} is C_1-C_4 alkyl group, C_1-C_4 haloalkyl group or C_3-C_6 alkenyl group;

R^{34} and R^{35} are independently hydrogen atom or C_1-C_4 alkyl group;

R^{36} is hydrogen atom, C_1-C_6 alkyl group, C_3-C_6

alkenyl group or C_3-C_6 alkynyl group;

R^{37} is hydrogen atom, C_1-C_4 alkyl group or halogen atom;

R^{38} is hydrogen atom, C_1-C_6 alkyl group, C_3-C_6 cycloalkyl group, C_3-C_6 alkenyl group, C_3-C_6 alkynyl group, C_2-C_6 alkoxyalkyl group, C_1-C_6 haloalkyl group, phenyl group whose ring may be substituted with at least one substituent selected from the group consisting of halogen atom, C_1-C_4 alkyl group and C_1-C_4 alkoxy group, $-CH_2CO_2(C_1$-C_4 alkyl) group or $-CH(CH_3)CO_2(C_1$-C_4 alkyl) group;

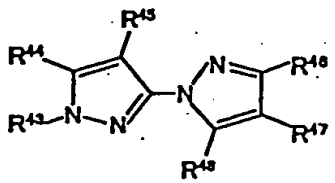
R^{39} is hydrogen atom, C_1-C_2 alkyl group or $C(O)O(C_1$-C_4 alkyl) group;

R^{40} is hydrogen atom, C_1-C_6 alkyl group, C_1-C_6 alkoxy group or $NH(C_1$-C_6 alkyl) group;

R^{41} is C_1-C_6 alkyl group, C_1-C_6 haloalkyl group, C_1-C_6 alkoxy group, $NH(C_1$-C_6 alkyl) group, phenyl group whose ring may be substituted with one substituent selected from the group consisting of R^{42} group, benzyl group and C_2-C_8 dialkylamino group; and

R^{42} is C_1-C_6 alkyl group, one or two halogen atoms, C_1-C_6 alkoxy group or CF_3 group;

(3) a compound of the formula (II):



or nipilacrofen,

wherein R^{43} is C_1-C_4 alkyl group;

R^{44} is C_1-C_4 alkyl group, C_1-C_4 alkylthio group, C_1-C_4 alkoxy group, C_1-C_4 haloalkyl group, C_1-C_4 haloalkylthio group or C_1-C_4 haloalkoxy group;

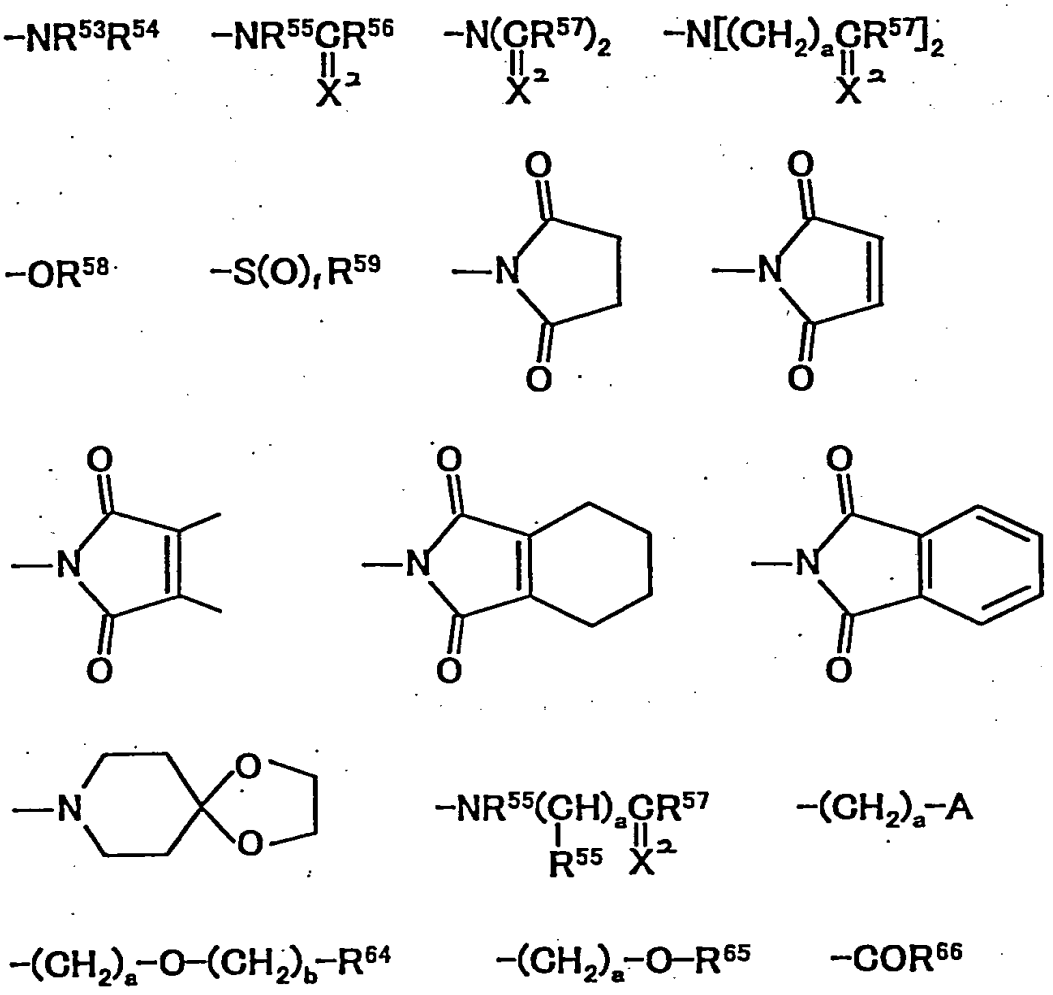
R^{43} and R^{44} together may form $-(CH_2)_3-$ or $-(CH_2)_4-$;

R^{45} is hydrogen atom or halogen atom;

R^{46} is hydrogen atom or C_1-C_4 alkyl group;

R^{47} is hydrogen atom, nitro group, cyano group, $-COOR^{49}$ group, $-C(=X)NR^{50}R^{51}$ group or $-C(=X^2)R^{52}$ group;

R^{48} is hydrogen atom, halogen atom, cyano group, C_1-C_4 alkyl group optionally substituted with at least one substituent selected from the group consisting of halogen atom and hydroxyl group, C_1-C_4 alkoxy group, phenyl group optionally substituted with at least one substituent selected from the group consisting of halogen atom, nitro group, cyano group, C_1-C_4 alkyl group, C_1-C_4 alkoxy group and halo-C_1-C_4 alkyl group, pyrrolyl group, C_2-C_8 alkyl group, C_3-C_8 alkenyl group, C_3-C_8 alkynyl group, C_3-C_8 alkoxy group, a group selected from the group consisting of C_2-C_8 alkyl group, C_3-C_8 alkenyl group, C_3-C_8 alkynyl group and C_3-C_8 alkoxy group into which at least one oxygen atom is inserted, or any one of groups represented by the following formulas:



wherein R^{49}, R^{50} and R^{52} are, the same or different, hydrogen atom or C_1-C_4 alkyl group;

R^{50} and R^{51} may form saturated alicyclic 5 or 6 membered ring together with the nitrogen atom to which they are attached;

R^{52} is hydrogen atom, C_1-C_4 alkyl group or C_1-C_4 alkyl group substituted with at least one halogen atom;

R^{53} is hydrogen atom, C_1-C_4 alkyl group optionally substituted with at least one halogen atom, C_2-C_6 alkenyl group optionally substituted with at least one halogen atom, C_3-C_6 alkynyl group optionally substituted with at least one halogen atom, phenyl group optionally substituted with at least one halogen atom, C_3-C_8 cycloalkyl group, cyanomethyl group, or $R^{63}CO$- group;

R^{54} is hydrogen atom, C_1-C_6 alkyl group optionally substituted with at least one halogen atom, C_2-C_6 alkenyl group optionally substituted with at least one halogen atom, C_3-C_6 alkynyl group optionally substituted with at least one halogen atom, phenyl group optionally substituted with halogen atom, C_3-C_8 cycloalkyl group, cyanomethyl group, C_1-C_4 alkoxy-C_1-C_6 alkyl group, di-C_1-C_4 alkylamino-C_1-C_4 alkyl group, tetrahydrofurfurylmethyl group, C_3-C_6 alkynyloxy-C_1-C_4 alkyl group, benzyl whose ring may be substituted with substituent selected from the group consisting of halogen atom, nitro group, cyano group, C_1-C_4 alkyl group, C_1-C_4 alkoxy group and halo-C_1-C_4 alkyl group, $-C(=X^2)R^{63}$ group, $-(CH_2)_a-(O)_d-R^{70}$ group, $-(CH_2)_a-O-(CH_2)_b-R^{70}$ group, $-(CH_2)_a-X^2-R^{76}$ group;

R^{53} and R^{54} together with the nitrogen atom to which they are attached may form saturated alicyclic 3, 5 or 6 membered ring or aromatic 5 or 6 membered ring in which a carbon atom may be optionally replaced with oxygen

atom;

R^{55} is hydrogen atom, C_1-C_4 alkyl group, C_2-C_6 alkenyl group or C_3-C_6 alkynyl group, or R^{55} and R^{56} together may form $-(CH_2)_e-$;

R^{56} and R^{57} are independently C_1-C_4 alkyl group optionally substituted with at least one halogen atom, C_2-C_6 alkenyl group optionally substituted with at least one halogen atom, C_3-C_6 alkynyl optionally substituted with at least one halogen atom or phenyl group optionally substituted with at least one halogen atom, hydrogen atom, C_3-C_6 cycloalkyl group, $-XR^{60}$ group or $-NR^{61}R^{62}$ group;

R^{58} is hydrogen atom, C_1-C_6 alkyl group, C_2-C_6 alkenyl group, C_3-C_6 alkynyl group, C_1-C_4 alkylcarbonyl group, cyano-C_1-C_3 alkyl group, C_1-C_4 alkoxycarbonyl-C_1-C_4 alkyl group, di-C_1-C_4 alkoxycarbonyl-C_1-C_4 alkyl group, benzyl group, C_1-C_4 alkoxy-C_1-C_4 alkynyl group, $-(CH_2)_a-R^{75}$ group, $-(CH_2)_a-X^2-R^{72}$ group, $-(CH_2)_a-X^2-(CH_2)_b-R^{72}$ group or $-(CH_2)_a-X^2-(CH_2)_b-X^2-(CH_2)_c-R^{72}$ group;

R^{59} is hydrogen atom, C_1-C_4 alkyl group, C_2-C_6 alkenyl group, C_3-C_6 alkynyl group, cyano-C_1-C_3 alkyl group, C_1-C_4 alkylcarbonyl-C_1-C_3 alkyl group or phenyl group;

R^{60} is C_1-C_4 alkyl group optionally substituted with at least one halogen atom;

R^{61} and R^{62} are, the same or different, hydrogen atom or C_1-C_4 alkyl group;

R^{63} is C_1-C_4 alkyl group optionally substituted with at least one halogen atom, C_1-C_4 alkoxy-C_1-C_4 alkyl group, C_1-C_4 alkylthio-C_1-C_4 alkyl group, C_3-C_6 cycloalkyl group, phenyl group whose ring may be substituted with one substituent selected from the group consisting of halogen atom, nitro group, cyano group, C_1-C_4 alkyl group, C_1-C_4 alkoxy group and halo-C_1-C_4 alkyl group, $-NR^{73}R^{74}$ group or $-(CH_2)_a-(O)_d-R^{75}$ group;

R^{64} is C_1-C_4 alkoxycarbonyl group or carboxyl group;

R^{65} is chloromethyl group, cyanomethyl group, C_3-C_6 cycloalkyl group into which at least one oxygen atom may be inserted, or C_1-C_4 alkoxycarbonyl-C_1-C_4 alkyl group;

R^{66} is hydroxyl group or $-NR^{67}R^{68}$ group;

A is $-NR^{67}R^{68}$ group or $-S(O)_f-R^{69}$ group;

R^{67} and R^{68} are, the same or different, hydrogen atom or C_1-C_4 alkyl group;

R^{69} is C_1-C_4 alkyl group or C_1-C_4 haloalkyl group;

R^{70} is hydrogen atom, hydroxyl group, halogen atom, C_1-C_4 alkyl group optionally substituted with at least one C_1-C_4 alkoxy group, C_3-C_6 cycloalkyl group into which at least one oxygen atom may be inserted, C_3-C_6 cycloalkyl group optionally substituted with one or two methyl groups, furyl group, thienyl group or $-C(=O)R^{71}$ group;

R^{71} and R^{72} are, the same or different, C_1-C_4 alkyl

group or C_1-C_4 alkoxy group;

R^{73} and R^{74} are, the same or different, C_1-C_4 alkyl group or phenyl group;

R^{75} is C_3-C_6 cycloalkyl into which at least one oxygen atom may be inserted, C_3-C_6 cycloalkyl group optionally substituted with one or two methyl groups, furyl group, thienyl group or $-C(=O)R^{71}$ group;

R^{76} is C_1-C_4 alkyl group;

a, b and c is independently 1, 2 or 3;

d is 0 or 1;

e is 2 or 3;

f is 1 or 2; and

X^2 is oxygen atom or sulfur atom.

52. The method according to claim 1, additionally comprising the steps of:

introducing into the plant cell, a second gene selected from a gene encoding a protein substantially having protoporphyrinogen oxidase activity, a gene encoding a protein substantially having 5-enolpyruvylshikamate-3-phosphate synthase activity and a gene encoding a protein substantially having glyphosate oxidoreductase activity; and

expressing said second gene.

53. A plant cell having:

a gene encoding a protein having the following

characteristics (a) to (c):

(a) having a specific affinity for a substance which is concerned with the weed control activity of a weed control compound,

(b) having substantially no capability of modifying a substance for which said protein has a specific affinity, and

(c) being substantially free from framework regions of variable regions in an immunoglobulin; and

at least one altered form of an enzymatic activity which gives a resistance to a weed control compound in an amount inhibiting a naturally occurring form of said enzymatic activity, wherein said altered form of an enzymatic activity is a form of enzymatic activity selected from a protoporphyrinogen oxidase activity, 5-enolpyruvylshikamate-3-phosphate synthase activity and glyphosate oxidoreductase activity.

54. A plant cell having:

a gene encoding a protein having the following characteristics (a) to (c):

(a) having a specific affinity for a substance which is concerned with the weed control activity of a weed control compound,

(b) having substantially no capability of modifying a substance for which said protein has a specific

affinity, and

(c) being substantially free from framework regions of variable regions in an immunoglobulin; and

an altered protoporphyrinogen oxidase activity which gives a resistance to a weed control compound in an amount inhibiting a natural occurring protoporphyrinogen oxidase activity.

55. A plant cell having:

a gene encoding a protein having the following characteristics (a) to (c):

(a) having a specific affinity for a substance which is concerned with the weed control activity of a weed control compound,

(b) having substantially no capability of modifying a substance for which said protein has a specific affinity, and

(c) being substantially free from framework regions of variable regions in an immunoglobulin; and

an altered 5-enolpyruvylshikamate-3-phosphate synthase activity which gives a resistance to a weed control compound in an amount inhibiting a natural occurring 5-enolpyruvylshikamate-3-phosphate synthase activity.

56. A plant cell having:

a gene encoding a protein having the following

characteristics (a) to (c):

(a) having a specific affinity for a substance which is concerned with the weed control activity of a weed control compound,

(b) having substantially no capability of modifying a substance for which said protein has a specific affinity, and

(c) being substantially free from framework regions of variable regions in an immunoglobulin; and

an altered glyphosate oxidoreductase activity which gives a resistance to a weed control compound in an amount inhibiting a natural occurring glyphosate oxidoreductase activity.

57. The plant cell according to claim 53, wherein said altered form of an enzymatic activity is conferred by a second gene selected from a gene encoding a protein substantially having a protoporphyrinogen oxidase activity, a gene encoding a protein substantially having 5-enolpyruvylshikamate-3-phosphate synthase activity and a gene encoding a protein substantially having glyphosate oxidoreductase activity.

58. The plant cell according to claim 57, wherein the gene encoding a protein having the following characteristics (a) to (c):

(a) having a specific affinity for a substance

which is concerned with the weed control activity of a weed control compound,

(b) having substantially no capability of modifying a substance for which said protein has a specific affinity, and

(c) being substantially free from framework regions of variable regions in an immunoglobulin; and

the second gene are introduced into the plant cell in the form in that both of said genes are operably ligated to a promoter and a terminator both of which are functional in said plant cell.

59. The plant cell according to claim 57, wherein the protein substantially having a proto-porphyrinogen IX oxidase activity is protoporphyrinogen IX oxidase, the protein substantially having a 5-enol-pyruvylshikamate-3-phosphate synthase activity is 5-enolpyruvylshikamate-3-phosphate synthase and the protein substantially having glyphosate oxidoreductase activity is glyphosate oxidoreductase.

60. The plant cell according to claim 53, wherein the plant cell is derived from dicotyledones or monocotyledones.

61. A plant comprising the plant cell of claim 54.

62. A plant comprising the plant cell of claim

55.

63. A plant comprising the plant cell of claim 56.

64. A method for protecting a plant which comprises applying a protoporphyrinogen IX oxidase inhibitory-type compound to a growth area of the plant of claim 61.

65. A method for protecting a plant which comprises applying a protoporphyrinogen IX oxidase inhibitory-type compound and a compound inhibiting 5-enolpyruvylshikamate-3-phosphate synthase to a growth area of the plant of claim 62.

66. A method for protecting a plant which comprises applying a protoporphyrinogen IX oxidase inhibitory-type compound and a compound inhibiting 5-enolpyruvylshikamate-3-phosphate synthase to a growth area of the plant of claim 63.

67. A method for selecting a plant which comprises applying a protoporphyrinogen IX oxidase inhibitory-type compound to a growth area of the plant of claim 61 and other plants, and selecting either plant on the basis of difference in growth between the plants.

68. A method for selecting a plant which comprises applying a protoporphyrinogen IX oxidase inhibitory-type compound and a compound inhibiting 5-

enolpyruvylshikamate-3-phosphate synthase to a growth area of the plant of claim 62 and other plants, and selecting either plant on the basis of difference in growth between the plants.

69. A method for selecting a plant which comprises applying a protoporphyrinogen IX oxidase inhibitory-type compound and a compound inhibiting 5-enolpyruvylshikamate-3-phosphate synthase to a growth area of the plant of claim 63 and other plants, and selecting either plant on the basis of difference in growth between the plants.